A switch from a double-weighted sales factor formula to a sales-only formula would not necessarily cut the taxes of all corporations doing business in Wisconsin, however. This change actually would lead to higher Wisconsin corporate income tax liabilities for out-of-state corporations that make a disproportionate share of their sales to Wisconsin residents. Consider the mirror-image of the example above: a corporation with all of its property and payroll outside of Wisconsin but all of its sales to Wisconsin residents would apportion 100 percent of its profits to Wisconsin under a single sales factor formula while now only 50 percent of its profits are taxable in Wisconsin.

Research by the Wisconsin Department of Revenue confirms that changing to a single sales factor formula could lead to tax cuts for some multistate corporations and tax increases for others. The Department estimates that if a single sales factor apportionment formula had been in place in tax year 1996, 2426 corporations that sell a disproportionate share of their Wisconsin output to customers in other states (comprising less than two percent of all corporations doing business in the state) would have received a $113.5 million tax cut.[4] This tax cut would have equaled nearly 30 percent of all 1996 corporate taxes paid by multistate corporations. Partially offsetting this tax cut would have been a $42.6 million tax increase for 3,997 firms doing most of their production out of state but selling a disproportionate share of it in Wisconsin. As noted above, the Revenue Department also estimates that this net $70.9 million revenue loss estimated for 1996 ($113.5 million minus $42.6 million) would be on the order of $80 million today due to overall growth in Wisconsin's corporate tax base.

An approximately $80 million annual revenue loss from a change to a sales-only apportionment formula is already significant in the context of the $1.7 billion budget gap the Legislative Fiscal Bureau currently estimates will exist in the 2001-2003 biennium.[5] However, there is good reason to expect the actual revenue loss to be significantly larger once a single sales factor formula is fully in place. A significant portion of the increased taxes on predominantly out-of-state corporations that the Wisconsin Revenue Department forecasts might never materialize. The Department's revenue loss estimate did not attempt to factor-in two fundamental changes that might occur in the behavior of the out-of-state corporations that would pay higher taxes under a sales-only formula than they do under the current formula.[6]

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[4] Wisconsin Legislative Fiscal Bureau Paper #111, June 7, 1999, p. 7, paragraph 15 and Table 2.

[5] Letter dated May 11, 1999 from Robert W. Lang, Director, Wisconsin Legislative Fiscal Bureau, to Senator Brian Burke and Representative John Gard, Table 3, page 9.

[6] Conversation with Dennis Collier, Director of State Tax Policy, Wisconsin Department of Revenue,

(continued...)

Out-of-State Corporations May Avoid Potential Tax Increases by Removing Property and Jobs from Wisconsin

Some corporations doing business in Wisconsin are likely to be in a situation in which they have a significant share of their sales in the state but only a very small share of their property and payroll; as explained above, such corporations will experience substantial Wisconsin corporate tax increases as a result of the shift from a double-weighted sales to a sales-only formula. Such corporations may well seek to eliminate completely the ability of Wisconsin to subject them to a corporate income tax.

In order to eliminate Wisconsin's legal right to tax its profit, a corporation generally would have to remove from the state all of its property and personnel. However, the need to take such a drastic step has been mitigated by a little-known federal law, Public Law 86-272. This law provides that corporations cannot be subjected to a state's corporate income tax merely because they have personnel within the state's boundaries, provided those personnel are only engaged in the solicitation of sales of goods and provided they work out of their homes or visit from out of state.[7] Thus, the out-of-state manufacturing corporations that would be most likely to face significantly higher Wisconsin corporate income taxes as a result of a shift to a single sales factor apportionment formula could restructure their Wisconsin activities to enjoy the best of both worlds. They could maintain sales personnel in Wisconsin in order to continue availing themselves of Wisconsin's market, while moving non-sales personnel and facilities (like warehouses and R & D labs) outside the state to avoid taxation. If this quite feasible scenario were to transpire in a significant number of cases, the revenue loss from switching to a single sales factor formula could be substantially greater than currently projected by the Wisconsin Department of Revenue. Rather than paying the higher taxes the Department projects, many out-of-state corporations earning profits in Wisconsin might end up paying no Wisconsin corporate income tax at all.

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[6] (...continued)
on June 23, 1999.

[7] If the corporation wants to be protected from taxation in a particular state, Public Law 86-272 also requires that the orders resulting from its in-state solicitation activities be "accepted" out-of-state (an easily-satisfied formality) and that the ordered goods be shipped into the state from an out-of-state location.

Out-of-State Corporations May Avoid Potential Tax Increases by Taking Advantage of the Absence of Combined Reporting

For some out-of-state corporations that would face significantly higher tax liabilities in Wisconsin resulting from a change to a sales-only apportionment formula, limiting their presence in Wisconsin to a visiting sales force or to salespeople who work out of their homes will not be an option. Some corporations may have so many salespeople in the state that it would not be feasible to have them work out of their homes; a central office would be needed. Other corporations may need to have personnel in the state providing direct services to their customers, such as installing their products, repairing them, or training purchasers in their use. Some corporations may have built a research and development facility in the state and would not wish to incur the cost and suffer the disruption of operations that would be entailed in moving it out of Wisconsin.

Fortunately for such corporations, there is a strategy for counteracting higher tax liabilities resulting from the adoption of a sales-only apportionment formula that does not require the physical removal of their property and personnel from Wisconsin. The out-of-state corporation can avoid the higher taxes that would result from the adoption of a single sales factor formula by separately-incorporating whatever Wisconsin activities or physical presence establishes its taxability in the state and using transfer pricing to insure that the separate Wisconsin corporation never reports much — if any — profit. *This strategy works, however, only so long as Wisconsin does not mandate combined reporting.*

If a multistate business creates a separate corporation to "house" activities physically present in Wisconsin, it may be able to offset completely the increase in its tax liability that would occur because of the change to a sales-only formula. For example, if an out-of-state manufacturing corporation needs to have a sales office in Wisconsin but otherwise has no need to be physically present in the state, it can separately incorporate this office and the salespeople who work there as a retailing subsidiary. Then, it can sell its manufactured goods to the subsidiary at a high price that allows the subsidiary to earn at most a nominal profit.[8] The subsidiary then resells the goods to the business'

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[8] Theoretically, transfer prices could be set to reduce the in-state subsidiary's profit to zero. However, this is likely to attract an auditor's attention and could lead to a legal challenge by the state of the corporation's transfer prices or an effort to treat the Wisconsin corporation as a sham established only for tax avoidance purposes. Like the tax laws of most separate-entity states, Wisconsin's laws provide discretionary authority to tax officials to reallocate profit to in-state corporations in particularly abusive situations. Most corporations would seek to avoid the exercise of such authority by allowing

(continued...)

existing customers.[9] Through this mechanism, the corporation can ensure that most of the profit on the sale of its goods would accrue to the out-of-state parent that would not be taxable in Wisconsin; only the subsidiary would be taxable on its relatively small earnings.

In sum, if Wisconsin switches to a sales-only apportionment formula without simultaneously adopting combined reporting, it is unlikely the state will be able to offset — to the degree currently predicted — the revenue loss resulting from cutting taxes of in-state corporations by raising taxes on out-of-state corporations. The latter will seek to avoid their higher tax liabilities by dividing themselves up into separate legal entities and stepping up their efforts to shift as much income as possible outside Wisconsin.[10] Wisconsin's current separate-entity taxation policy combined with a change to a single sales factor apportionment formula seems likely to cause even more serious erosion of Wisconsin's corporate income tax base than is already occurring.

The Dubious Economic Development Benefits of Single-Sales Factor Apportionment

Proponents of switching to a single sales factor apportionment formula do not agree that such a change will lead to an erosion of Wisconsin's tax base, at least not in the long run. They argue that adopting a sales-only apportionment formula will encourage additional business investment and job creation in Wisconsin. The earnings and purchases of newly-hired employees will allegedly generate sufficient personal income tax and sales tax revenues to offset any narrowing of the corporate income tax base arising from the change in apportionment formulas. In particular, single sales factor supporters argue that adoption of a sales-only formula will attract to the state

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[8] (...continued)
the in-state business to report a nominal profit.

[9] There is no need under this arrangement for the newly-created retailing subsidiary to incur additional costs associated with receiving and storing in Wisconsin goods sold to it by its parent. When the Wisconsin subsidiary makes a sale to one of its customers, it can simply fulfill the order by directing the out-of-state parent to ship the product directly to the customer. In other words, although on paper the parent is selling the product to the subsidiary, which is in turn reselling it to the final customer, this does not preclude the parent from delivering the product directly to the customer as it has always done.

[10] It is worth noting that three of Wisconsin's neighboring states that have adopted a single sales factor apportionment formula — Illinois, Nebraska, and Minnesota — would *not* be subject to revenue losses from corporations' restructuring themselves in this manner because they mandate combined reporting.

many manufacturing businesses that are looking for new places to locate plants that will serve national markets and thus will sell a disproportionate share of their output outside of Wisconsin. They argue as well that adoption of a single sales formula will encourage existing Wisconsin manufacturing businesses to choose to expand operations in Wisconsin rather than elsewhere as demand for their products grows over time.[11]

Economic development arguments in support of sales-only apportionment are of dubious validity for a number of reasons. First, there is a strong consensus among economists that a low level of aggregate state and local taxes in a particular state is unlikely by itself to affect significantly the state's attractiveness as a business location. Other business costs for workers, transportation, and energy are much greater than the costs of state and local taxes and often vary much more among locations as well. Accordingly, the aggregate cost of state and local taxes has at most a small impact on the investment location decisions of most businesses.[12] A low effective rate for a single tax, like the corporate income tax, seems even less likely to affect many such decisions.[13] Given that the short-term revenue cost of changing to sales-only apportionment is $80 million annually and any investment incentive effect is unlikely to be strong, the cost-effectiveness of this policy change seems particularly questionable.

Moreover, the reduction in revenue available to Wisconsin state government from the change to a sales-only formula could have a negative impact on the state's attraction as a business location because it could interfere with the state's ability to preserve public services and to achieve fiscal stability. Businesses and their employees need and want high-quality public services, such as good schools and public universities, a modern transportation infrastructure, and adequate public recreation facilities. Before they make long-term investments, businesses also want to be assured that the state's long-term revenues and expenditures are in balance so that the state will be less likely to need to cut services that businesses require or increase business taxes. An $80 million cut in revenues from the switch to sales-only apportionment could force the state to

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[11] Again, recall that a single sales factor formula reduces taxes for businesses that sell a disproportionate share of their goods outside of the state in which the goods are produced.

[12] Stephen T. Mark, Therese J. McGuire, and Leslie E. Papke, "What Do We Know About the Effect of Taxes on Economic Development? Lessons from the Literature for the District of Columbia," *State Tax Notes*, August 25, 1997.

[13] Single sales factor apportionment does not appear to be an economic development panacea. Iowa and Missouri have allowed corporations to use the sales-only formula for decades, and yet both states have a poorer record in generating manufacturing jobs than does supposedly "high-tax" Wisconsin. Between 1978 and 1998, manufacturing employment grew approximately eight percent in Wisconsin but only four percent in Iowa; it fell eight percent in Missouri.

reduce aid to local education, defer road maintenance, or otherwise degrade the quality of public services. As noted previously, Wisconsin also appears to be facing a serious budget gap in the 2001-2003 biennium; enacting what is intended to be a permanent cut in the corporate tax through the change in apportionment formulas is likely to widen this gap further. In short, even if a change in the apportionment formula taken by itself could provide a modest incentive for new investment in Wisconsin in the long run, that incentive effect could be negated by the immediate effects of the attendant revenue loss on the quality of Wisconsin public services and the state's fiscal stability.

Finally, even if a sales-only formula might be an attractive feature of a state's tax system for the small minority of corporations that are "in the market" at any given time for the establishment or major expansion of a plant that will sell a large share of its output to out-of-state customers, such a formula can actually be a double-edged sword that both destroys existing jobs and discourages the creation of new ones. As discussed above, a single sales factor formula can create strong incentives for out-of-state corporations that would pay higher corporate taxes under such a policy to *remove* all non-sales personnel and facilities from Wisconsin. Public Law 86-272 makes this decision even easier, because it permits an out-of-state corporation to continue making sales in Wisconsin and even maintain sales personnel in Wisconsin without being subject to Wisconsin's corporate tax. There is no inherent reason to believe that a switch to a single sales factor formula is more likely to attract new jobs than it is to encourage the removal of existing ones.

In addition to encouraging some out-of-state corporations to eliminate existing jobs in Wisconsin, adoption of a sales-only formula can combine with Public Law 86-272 to create a disincentive for the creation of new jobs in the state. Take as an example a Missouri manufacturer of brewery supplies that makes 50 percent of its sales to Wisconsin customers; assume the business of these customers is solicited by a few sales people who visit from Missouri. Such a manufacturer would not currently pay any Wisconsin corporate income tax because its activities in Wisconsin are limited to solicitation of sales and it is therefore rendered immune from Wisconsin taxation by Public Law 86-272. Now imagine that the Missouri manufacturer currently is contemplating opening a sales office in Wisconsin and is evaluating whether doing so is worth the cost. (On the one hand, the company is having difficulty recruiting salespeople who are willing to travel such a long distance; on the other hand, the cost of the office space to house them in Milwaukee will exceed the cost in St. Louis.) Assume that the Wisconsin sales office would account for 10 percent of the manufacturer's total property and 10 percent of its total payroll. Under the current double-weighted sales apportionment formula, if the manufacturer opened the Wisconsin office, 30 percent of its profits would become subject to Wisconsin's corporate tax (10% WI property + 10% WI payroll + 50% WI sales +50% WI sales ÷ 4 = 30% of total profit taxable by

Wisconsin). If Wisconsin switches to a sales-only apportionment formula, however, 50 percent of this corporation's profit would be taxable in Wisconsin, because 50 percent of its sales are in Wisconsin. If the benefit of opening the Wisconsin sales office only slightly outweighs the cost under the current double-weighted sales formula, it seems entirely feasible that the increase in Wisconsin corporate tax liability resulting from the change in formulas could be enough to tip the decision against the new investment.

Corporations generally try to minimize the number of states in which they are subject to corporate income tax, if for no other reason than to avoid the cost of complying with different states' tax rules. Still, there are times at which they do contemplate expanding into states in which they are making sales but are not currently taxable; the above example shows that a change to a single sales factor apportionment formula can reduce Wisconsin's ability to attract such firms and the jobs they bring with them. The lesson, again, is that adopting a sales-only apportion formula is by no means guaranteed to improve Wisconsin's desirability as a business location, despite the $80 million annual price tag of adopting such a policy.

REPRESENTING WISCONSIN BUSINESS
Wisconsin Manufacturers & Commerce

Memo

TO: **Members of the Senate Committee on Economic Development, Housing and Government Operations**

FROM: **Joan Hansen, Director, Tax & Corporate Policy**

DATE: **March 29, 2000**

RE: **Assembly Bill 735: Single Sales Factor Apportionment**

Wisconsin Manufacturers & Commerce strongly supports Assembly Bill 735. As you probably know WMC's top priority during the budget process was the adoption of single factor as proposed by Governor Thompson.

If a corporation does business in more than one state, its income must be fairly apportioned among the taxing states. In other words, no one state can tax the corporation's entire income. The current formula allocates income to the state by comparing the corporation's sales into Wisconsin with its total sales, its payroll in Wisconsin with its total payroll and its property in Wisconsin to its total property.

AB 735 proposes to make the allocation based on the sales factor only, commonly referred to as the single-sales factor apportionment method of taxation. This means multi-state corporations will be taxed based only on sales instead of the current combination of sales, property and payroll. For insurance companies and financial institutions a similar approach would be used.

Governor Thompson, the Assembly, Senator Shibilski and co-sponsors of AB 735 should be commended for their perseverance on this important issue and supporting a plan that gives Wisconsin multi-state corporations a "Home Field Advantage."

AB 735 passed the Assembly Ways and Means Committee on a 12-1 bipartisan vote, then passed the Assembly 76-22 on a bipartisan vote. Single sales factor also passed the Joint Committee on Finance on a 13-3 bipartisan vote during the budget debate. This plan deserves to move forward in the Senate and should continue to be supported by pro-growth, pro-jobs lawmakers.

As ridiculous as it sounds, our current tax system gives companies a tax break when they move jobs out of Wisconsin and a tax increase when they create jobs in the state.

This is why we need the "Home Field Advantage" plan that AB 735 offers. Homegrown businesses would not be penalized for keeping and creating jobs in Wisconsin. It's good for business and good for workers.

The significance of this change for Wisconsin's future economic growth cannot be overstated.

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In addition to ending the incentive to move jobs elsewhere, the single sales factor would end the advantages given to out-of-state companies selling in Wisconsin, while keeping their capital and labor located in a single sales factor state. The current system allows them to pass more of their tax burden to Wisconsin's businesses through the corporate tax formula.

This phenomenon is confirmed by a study released in February by the University of Wisconsin-Milwaukee and the University of Chicago.

The researchers report that apportioning income to a state in direct proportion to the amount of property and payroll located in the state, as Wisconsin does, creates a tax penalty for businesses that choose to add jobs or expand their facilities within that state. In effect, including property and payroll in an apportionment formula transforms a state corporate income tax into a direct tax on the amount of property and payroll located in the state.

AB 735 eliminates this penalty and encourages Wisconsin's businesses to expand here.

The UWM/UC study confirms this, estimating that 67,000 new jobs will be created and $51 million will be generated in additional tax revenue if the single sales factor is adopted in Wisconsin. Furthermore, non-Wisconsin corporations with little or no capital or labor here but selling products in state would receive a tax increase. This effect will likely act as a catalyst for out-of-state corporations to move plants and jobs here.

In the long run, tax revenue from non-Wisconsin corporations and from newly created jobs will undoubtedly make-up the difference in the initial loss of revenue to the state.

Switching to a single sales factor is about protecting our economic future -- keeping high-paying jobs here, creating more high-paying jobs, and remaining competitive in a global market. With an increasingly technology based economy, it is becoming easier and easier for corporations to locate anywhere. States with a reputation for over-regulation and high taxation will lose out in the long run.

As Wisconsin companies become increasingly foreign-owned, we will have to work even harder to keep jobs here by providing an environment where companies can compete nationwide and worldwide.

Wisconsin cannot be the last state to adopt the single sales factor tax method. As more and more states adopt it, those who don't are increasingly penalized.

Wisconsin needs to adopt single factor to catch-up to Illinois, Iowa, Minnesota, Indiana, Missouri and Michigan. We need to extend a "Home Field Advantage" to our homegrown businesses to protect jobs and Wisconsin's future.

Again, WMC urges the committee to support AB 735.

ECONOMIC IMPACT OF SINGLE FACTOR SALES APPORTIONMENT: JOB CREATION AND TAX REVENUES

by

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February 1999

ECONOMIC IMPACT OF SINGLE FACTOR SALES APPORTIONMENT: JOB CREATION AND TAX REVENUES

EXECUTIVE SUMMARY

This study estimates the impact that switching to a single factor sales apportionment formula would have on job creation and tax revenue for the State of Wisconsin. The estimates we present are based on the actual experiences of other states that have modified their apportionment formulae from 1978 to 1995. The analysis controls for other factors that can affect employment, such as state corporate income tax rates, state trends, state personal income growth rates, national unemployment rates, and the actions of other states regarding their apportionment formulae. We find that increasing the weight on the sales factor has significant positive effects on in-state employment. Based on the analysis, we estimate that switching to single factor sales apportionment will have a long-run impact of increasing the number of manufacturing jobs in Wisconsin by about 2.9 percent, or 18,000 new jobs. We further estimate that the number of non-manufacturing jobs would grow by 2.4 percent, or 49,000 new jobs. Together these jobs would have significant positive impact on the individual income taxes collected by the State of Wisconsin, creating an estimated $51 million in additional annual tax revenue. In sum, we find clear evidence that the adoption of a single factor sales apportionment formula should increase employment, generating additional personal income and individual income tax revenues for the State of Wisconsin. Coupled with neighboring states' aggressive modification of their own apportionment formulae, these results underscore the need for the State of Wisconsin to act promptly to remain competitive and avoid revenue and job losses to other states.

ECONOMIC IMPACT OF SINGLE FACTOR SALES APPORTIONMENT: JOB CREATION AND TAX REVENUES

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WHAT IS APPORTIONMENT?

Wisconsin corporate income tax collections totaled $627 million in fiscal year 1998, or roughly 7 percent of the state's total tax collections.[1] Wisconsin taxes the entire taxable income of corporations that conduct business solely within the State of Wisconsin. For example, if a small retailer has stores and makes sales only in Wisconsin, all of that retailer's income is subject to Wisconsin taxation. On the other hand, if a corporation does business and is subject to taxation in two or more states, the Supreme Court has ruled that the taxpayer has the right to have its income fairly apportioned among the taxing states.[2] In such cases, neither Wisconsin nor any other state is entitled to tax the corporation's entire income. Instead, each state can tax only that portion of the corporation's income attributable to assets and activities located within its borders. Therefore, if a retailer has stores located in both Wisconsin and Minnesota, Wisconsin can not tax 100 percent of the retailer's income, but rather must settle for taxing that amount of income that can be fairly apportioned to Wisconsin.

States use apportionment formulae to compute the percentage of a multistate corporation's total income that is taxable in a particular state. Apportionment formulae vary from state-to-state, but are usually based on the relative amounts of property, payroll and sales that a corporation has in a state. Historically, the most common approach has been to equally weight these three "factors," such that the state apportionment percentage equals the average of the property, payroll and sales factors, as follows:

$$\text{Apportionment } \% = \left(\frac{\text{property in} - \text{state}}{\text{total property}} + \frac{\text{payroll in} - \text{state}}{\text{total payroll}} + \frac{\text{sales in} - \text{state}}{\text{total sales}} \right) \Big/ 3$$

To illustrate, consider a corporation that does business in two states, X and Y. Assume the corporation's total taxable income is $10 million, and that it has 40 percent of its property, 30 percent of its payroll, and 20 percent of its sales in State X. If State X uses an equally-weighted three-factor formula, the corporation's State X apportionment

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1 Wisconsin Department of Administration, *1998 Annual Fiscal Report.*

2 *Complete Auto Transit, Inc. v. Brady*, 430 U.S. 274, 1977.

percentage is 30 percent ([40% + 30% + 20%]/3), in which case State X is entitled to tax the corporation on $3 million (30% × $10 million) of income.

Wisconsin currently uses an apportionment formula that includes all three factors, but with a double-weighting on sales.[3] This means that the sales factor is weighted 50 percent (rather than 33 percent as in an equally-weighted formula), while the property and payroll factors are weighted 25 percent each. The purpose of this report is to evaluate whether Wisconsin should consider amending its corporate income tax laws to adopt a single factor sales apportionment formula.

3 Wis. Sec. 71.25(6).

HOW THREE-FACTOR APPORTIONMENT PENALIZES IN-STATE INVESTMENT

Criteria for a "Good" Tax

An essential first step in evaluating the pros and cons of any proposed change in tax policy is to clearly identify the government's objectives with respect to taxation. Although different groups may suggest different criteria, there is general agreement regarding the following core criteria for what makes a good tax.

- **Raising revenues:** The purpose of taxation is to raise revenues to provide public services, the level of which is determined by elected officials. A good tax should provide adequate revenues to cover budgeted outlays.
- **Economic growth:** A good tax does not impede economic growth by distorting the incentives of taxpayers to work hard, save and invest. In a free-market economy, consumers and businesses are assumed to be the best judges of what goods and services should be produced, and how resources should be allocated. Taxes can interfere with this natural efficiency since taxing an activity will tend to reduce the level of that activity. Therefore, a good tax neither favors nor disfavors particular types of economic activity, but instead allows free market forces to shape the decisions of consumers and businesses.
- **Simplicity:** A good tax is easy for taxpayers to understand and compute. A bad tax is complex and administratively costly, causing taxpayers to expend undue amounts of time and money to compute and pay their taxes, and making it burdensome for state authorities to administer the tax.
- **Fairness:** A good tax distributes the total tax burden among taxpayers in an equitable manner. Unfortunately, the concept of tax equity is difficult to define or measure, and ultimately involves ethical issues and value judgements. Nevertheless, tax reforms always invoke discussions of equity and fairness, and the accompanying debate is often an emotional one for lawmakers and taxpayers alike.

Disincentives Created by Property and Payroll Factors

Wisconsin's economic future depends on the degree to which businesses are encouraged to locate, expand or retain their operations in Wisconsin. Businesses consider a number of factors when deciding where to locate their operations, including the quality and cost of labor, proximity to markets, transportation costs, the cost of utilities, and the quality of local schools and other public services. To a great extent, this is a cost-minimization decision, and therefore differential tax burdens can play a significant role in determining where a business chooses to locate or expand. Economists have done extensive research on this issue, and have found that corporate income taxes and other tax factors can have a significant effect on a region's economic development.[4] The impact of differential tax burdens can be particularly strong when a business is choosing between alternative sites within the same regional area (e.g., the economic corridor that lies along Interstate 94 between Chicago and Milwaukee), since non-tax factors such as labor costs may be quite similar within that region.

A three-factor apportionment formula attempts to measure the contribution of a corporation's capital (property), labor (payroll) and market (sales) in generating its business profits, and apportions that contribution to the state in which the underlying property, payroll or sales are located. Unfortunately, by apportioning income to a state in direct proportion to the amount of property and payroll located in the state, the three-factor formula imposes a tax penalty on businesses that choose to add jobs or expand their facilities within that state. In effect, including property and payroll in an apportionment formula transforms a state corporate income tax into a direct tax on the amount of property and payroll located within the state.[5]

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4 For reviews of this research, see Phillips and Goss, "The Effect of State and Local Taxes on Economic Development: A Meta-Analysis," *Southern Economic Journal*, October 1995; Bartik, "The Effects of State and Local Taxes on Economic Development: A Review of Recent Research," *Economic Development Quarterly*, February 1992; and Wasylenko, "Taxation and Economic Development: The State of the Economic Literature," *New England Economic Review*, March-April 1997.

5 Gordon and Wilson, "An Examination of Multijurisdictional Corporate Income Taxation Under Formula Apportionment," *Econometrica*, November 1986.

To illustrate, assume a large corporation is interested in locating a major new manufacturing plant, structured as a separate subsidiary, somewhere along Interstate 94 between Chicago and Milwaukee. This manufacturing company is expected to generate an annual profit of $10 million and will be subject to taxation in several states. Assume 20 percent of the plant's output will be sold in Wisconsin. Under current law, the subsidiary's Wisconsin apportionment percentage will be 10 percent if the plant is located south of the Illinois-Wisconsin border,[6] but increases to 60 percent if the plant is located north of the border.[7] Given Wisconsin's 7.9 percent corporate tax rate, the 50 percentage point difference in the Wisconsin apportionment percentage results in an additional $395,000 per year in Wisconsin corporate income taxes.[8] In contrast, under a single factor sales apportionment formula, the taxpayer's Wisconsin apportionment percentage would equal its Wisconsin sales factor of 20 percent regardless of where the plant is located, in which case there is no tax penalty for locating the plant in Wisconsin as opposed to Illinois.

In sum, Wisconsin's current three-factor formula creates a disincentive for businesses that require large investments in tangible property and payroll to locate their facilities in Wisconsin. The solution to this problem lies in removing this negative from the site location decision by applying the Wisconsin corporate income tax equally to all businesses, regardless of whether they locate facilities in Wisconsin. Eliminating this bias will allow business location decisions to be based primarily on non-tax factors.

Nationwide Trend Toward Emphasizing the Sales Factor

Historically, most states have used an equally-weighted three-factor apportionment formula.[9] In recent decades, however, a significant number of states have

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6 [0% property in WI + 0% payroll in WI + (2)(20% sales in WI)] ÷ 4 = 10%.

7 [100% property in WI + 100% payroll in WI + (2)(20% sales in WI)] ÷ 4 = 60%.

8 [Taxable income of $10,000,000] × [50 percentage point increase in the Wisconsin apportionment percentage] × [7.9% tax rate] = $395,000. Because state income taxes are deductible for federal tax purposes, any increase in Wisconsin taxes is partially offset by a corresponding decrease in federal income taxes.

9 Hellerstein and Hellerstein, *State Taxation, Volume I: Corporate Income and Franchise Taxes* (Warren Gorham and Lamont, 1993), ¶8.06.

amended their apportionment formulae to place more weight on the sales factor with a corresponding reduction in the weight placed on the property and payroll factors. State lawmakers are attracted to such formulae for a couple of reasons. First, as discussed above, a single factor sales apportionment formula removes a tax disincentive for business expansion. Locating additional property or payroll in a state that use a sales-only formula has no effect on the amount of income taxable in that state. Second, a single factor sales formula shifts a greater portion of the corporate income tax burden from in-state corporations that have large amounts of property and payroll in the state but with sales nationwide to out-of-state corporations that have relatively low proportions of property and payroll but with substantial sales in the state.

At present, 11 states and the District of Columbia use an equally-weighted three-factor formula, while 35 states use formulae that place more weight on the sales factor.[10] Wisconsin adopted a double-weighted sales formula in 1973. The following states use formulae that emphasize the sales factor:

- **Single factor sales formula**
  - » **Iowa, Nebraska and Texas** currently use a single factor sales formula.
  - » **Connecticut** enacted legislation in 1998 which allows financial service companies to use a single factor receipts formula. In addition, corporations deriving income from businesses other than the manufacture, sale or use of tangible property may also use a single factor sales formula. Businesses deriving income from the manufacture, sale or use of tangible property use the double-weighted sales formula.
  - » **Illinois** currently uses a double-weighted sales formula, but law changes enacted in 1998 increase the weight placed on the sales factor to 66.67

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10 Boucher and Healy, *1998 Multistate Corporate Tax Guide, Volume I* (Panel Publishers, 1998); and Donovan and Nakamura, 1160 T.M., *Income Taxes: State Formulary Apportionment Methods*. The 11 states that use an equally-weighted three-factor formula are Alabama, Alaska, Delaware, Hawaii, Kansas, Montana, North Dakota, Oklahoma, Rhode Island, Utah and Vermont. The remaining four states (Nevada, South Dakota, Washington and Wyoming) do not impose taxes measured by corporate income.

percent in 1999, 83.33 percent in 2000, and 100 percent (a single factor sales formula) starting in 2001.

- Massachusetts amended its laws in 1996 to allow defense contractors to elect to use a single factor sales formula. Certain mutual fund service corporations may also use a sales-only formula. The formula used by manufacturers was also amended to weight the sales factor 60 percent in 1996, 70 percent in 1997, 80 percent in 1998, 90 percent in 1999, and 100 percent (a single factor sales formula) starting in 2000. Businesses other than defense contractors and manufacturers use a double-weighted sales formula.

- Mississippi allows retailers, wholesalers and service companies to use a single factor sales formula. Manufacturers use either an equally-weighted three-factor formula or a double-weighted sales formula, depending on whether they sell their products principally at the wholesale or retail level.

- Missouri offers businesses the option of using a single factor sales formula or an equally-weighted three-factor formula.

- South Carolina permits companies other than manufacturers or dealers in tangible personal property to use a single factor sales formula. Manufacturers or dealers in tangible personal property use a double-weighted sales formula.

- **Double-weighted sales formula**

  - Arkansas, Arizona, California, Florida, Georgia, Idaho, Indiana, Kentucky, Louisiana, Maine, Maryland, New Jersey, New Mexico (through 1999), New York, North Carolina, Oregon, Pennsylvania, Tennessee (effective in 1999), Virginia (effective in 2000), West Virginia, and Wisconsin all use a formula that weights the sales factor 50 percent, and the property and payroll factors 25 percent each.

- **Other formulae that emphasize the sales factor**

  - » **Colorado** allows taxpayers to elect a two-factor formula that weights sales and property 50 percent each.

  - » **Michigan** used a double-weighted sales formula until 1996, when its formula was amended to increase the weight on the sales factor to 80 percent in 1997 and 1998, and 90 percent starting in 1999 (property and payroll will then be weighted 5 percent each).

  - » **Minnesota** uses a formula that weights sales 70 percent and property and payroll 15 percent each.

  - » **New Hampshire** uses a formula that weights sales 42.8 percent and property and payroll 28.6 percent each.

  - » **Ohio** currently uses a double-weighted sales formula. Effective in 1999, Ohio will use a formula that weights sales 60 percent and property and payroll 20 percent each.

Preemptive Strikes by Border States

The 1998 state business climate rankings of *Site Selection* magazine gave Wisconsin an overall ranking of 19th in the nation, whereas Michigan was ranked 3rd, Illinois 11th, Iowa 17th and Minnesota 18th.[11] It is worth noting that Wisconsin's border states have been particularly aggressive in changing their apportionment formulae to attract new business and expand economic growth with their borders. As Figure 1 indicates, Illinois, Iowa, Michigan and Minnesota all weight the sales factor more heavily than Wisconsin. Therefore, if Wisconsin were to increase the weight it places on the sales factor, it would merely be catching up with the competition.

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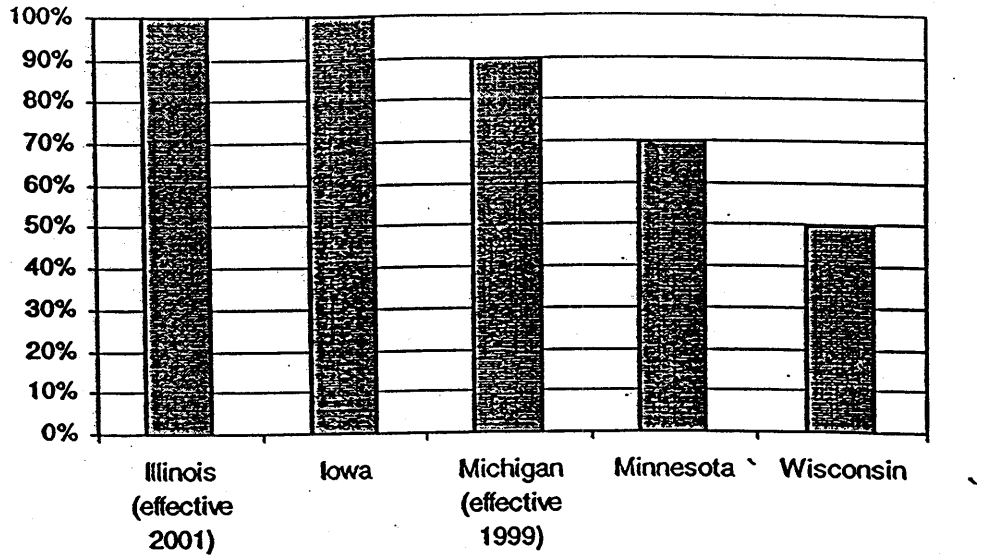
11 "1998's Business Climate Rankings: The Playing Field Levels," *Site Selection*, October/November 1998. The rankings are determined by the number of new and expanded facilities in a state, as well as a survey of corporate real estate executives.

Figure 1: Weighting of Sales Factor in Apportionment Formula



Increasing the weight assigned to the sales factor not only makes a state like Illinois a more attractive place to invest, it also has the effect of "exporting" the Illinois state tax burden from Illinois-based businesses to Wisconsin-based businesses. To illustrate, consider two corporations, Illinois Corp. and Wisconsin Corp. Each corporation does business only in Illinois and Wisconsin, has an annual profit of $10 million, and has sales that are split 50-50 between Illinois and Wisconsin. The only difference between the two corporations is that Illinois Corp. has all of its property and payroll located in Illinois while Wisconsin Corp. has all of its property and payroll located in Wisconsin. Illinois and Wisconsin currently both use a double-weighted sales formula. Therefore, in 1998 Illinois Corp. apportions 75 percent of its income to Illinois,[12] while Wisconsin Corp. apportions 25 percent of its income to Illinois.[13] Effective in 2001, Illinois will switch to a single factor sales formula. This will cause Illinois Corp.'s apportionment percentage to decrease from 75 percent to 50 percent, while Wisconsin Corp.'s apportionment percentage will increase from 25 percent to 50 percent. As the following table indicates, although Illinois's adoption of a sales-only formula does not affect the total amount of Illinois tax paid by the two corporations,

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12 [100% property in IL + 100% payroll in IL + (2)(50% sales in IL)] ÷ 4 = 75%

$182,500 of the total Illinois tax burden is exported from the Illinois-based corporation to the Wisconsin-based corporation.

	1998 Illinois tax (3-factor formula)	2001 Illinois tax (sales-only formula)	Change in Illinois tax
Illinois Corp.	$547,500[a]	$365,000[c]	–$182,500
Wisconsin Corp.	$182,500[b]	$365,000[c]	+$182,500
Totals	$730,000	$730,000	

[a] Income of $10 million × 75% apportionment percentage × 7.3% Illinois corporate tax rate
[b] Income of $10 million × 25% apportionment percentage × 7.3% Illinois corporate tax rate
[c] Income of $10 million × 50% apportionment percentage × 7.3% Illinois corporate tax rate

The only way for Wisconsin to mitigate this shifting of corporate tax burdens and thereby "level the playing field" is to also adopt a single factor sales apportionment formula.

13 [0% property in IL + 0% payroll in IL + (2)(50% sales in IL)] ÷ 4 = 25%

BENEFITS OF ADOPTING SINGLE FACTOR SALES APPORTIONMENT

Job Creation and Tax Revenues

Methodology and Sample Selection

Following earlier research conducted by Goolsbee and Maydew,[14] we compile a panel data set on the apportionment formulae and corporate tax rates for states from 1978 to 1995. There have been approximately 20 different state apportionment formula changes over this period and this variation allows us to develop reasonably precise estimates of their economic effects. Because of the long time period, we are also able to control for economic factors that independently influence employment.

The data used in our study are as follows. First, the time series on the apportionment formulae cover all states with a corporate income tax. These data were gathered from Commerce Clearing House's *State Tax Handbook*, various state tax codes, issues of *Significant Features of Fiscal Federalism* (published by the Advisory Commission on Intergovernmental Relations) and discussions with selected state departments of revenue.

Figure 2 shows the number of states that have adopted more than the standard one-third weight on sales in their apportionment formulae over this sample, not counting states with optional apportionment formulae. There is a consistent upward trend that begins after 1978 with the *Moorman* case in which the Supreme Court ruled that Iowa's use of the single factor sales apportionment formula was constitutional.[15]

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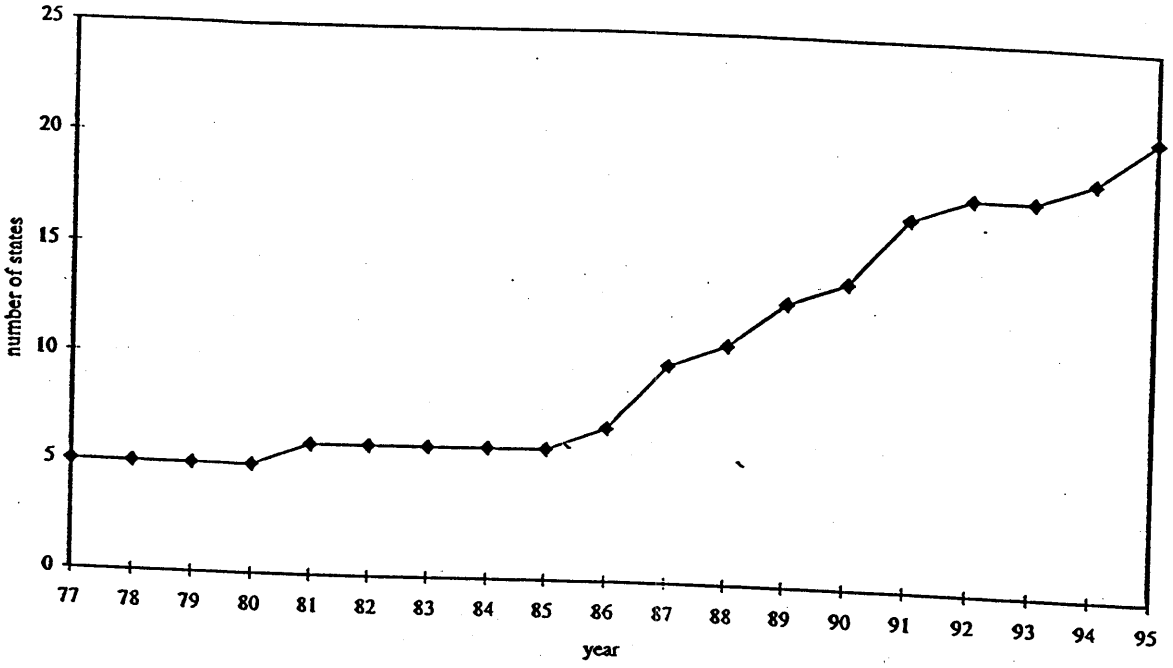
14 Goolsbee and Maydew, "Coveting Thy Neighbor's Manufacturing: The Dilemma of State Income Apportionment," 1998, NBER working paper No. 6614.

15 *Moorman Manufacturing Co. v. Bair*, 437 U.S. 267, 1978.

Figure 2: Number of States That Have Adopted an Increased Weighting on the Sales Factor



We match these apportionment formulae with state employment and earnings data compiled by the Bureau of Economic Analysis. These data include total private employment and total manufacturing employment by year for each state and are compiled from the ES-202 series of the Bureau of Labor Statistics and reported in the Bureau of Economic Analysis *State Personal Income* database. We also include the growth rate of average state personal income from the same source. For the national economy, we use data on the unemployment rate and the log of national employment. We allow the coefficient on the latter to vary by state in an attempt to control for population changes in a way that is not endogenous. The descriptive statistics for all the data in our sample are listed in Table 1.

Using these data, our basic empirical specification will regress the log of employment in state j in year t as follows:

$$\ln(EMPL_{jt}) = \alpha_j + \beta_1(Tax_{jt}) + \beta_1(\overline{Tax_t}) + \Gamma_1' Z_t + \Gamma_2' X_{jt} + \varepsilon_{jt}$$

where TAX_{jt} includes measures of the apportionment induced tax burden on payroll in the state, $\overline{Tax_t}$ is the weighted average tax burden on payroll for all states in that year, the Z_t are

annual controls to account for macroeconomic factors that independently influence state employment (e.g., the national unemployment rate) or year dummies which absorb common macro variation, and the X_{jt} are state level controls as well as state specific time trends.

The basic approach is to estimate whether, conditional on the state of the economy and other variables, employment is higher when a state puts less weight on the payroll factor in its apportionment formula. The results below support the proposition.

Findings

Column (1) of Table 2 presents a basic panel regression for the log of manufacturing employment in a state on the tax terms, state fixed effects, state time trends, the state personal income growth rate, the national unemployment rate, and the log of national employment interacted with the state dummies to account for growth in the labor force. Following the theory presented above, our tax terms are the state corporate income tax rate interacted with the payroll weight in the apportionment formula and the weighted average of the same variable for all states in that year (states are weighted by average manufacturing employment over the sample).

In this basic specification, the coefficients are significant and have the predicted signs. The non-tax variables are unsurprising and the tax variables are statistically significant. Reducing the tax burden on payroll in the state by reducing the corporate rate or the payroll weight in the apportionment formula increases manufacturing employment significantly. When other states reduce their payroll tax burden it does the opposite. The magnitude of the own-tax coefficient indicates that for a state with the mean corporate tax rate, changing from a one-quarter to zero payroll weight (i.e., moving from double-weighted sales to single factor sales apportionment) increases manufacturing employment by 3.5 percent in the average state.

In column (2) we take federal corporate taxation into account, assuming that all states' corporate income taxes are deductible from the federal tax, for simplicity. We do this by replacing the state tax rate with the state rate times one minus the federal rate. Here again the evidence supports the view that higher payroll tax burdens within a state reduce employment and vice versa for the payroll tax burden in other states. The magnitudes are

also very similar. Moving from one-quarter weighting to zero weighting on payroll increases manufacturing employment by 2.4 percent for the average state.

While these specifications seem to indicate that the apportionment formula is important, both specifications impose that the apportionment formula and the corporate tax rate have identical effects. The apparent effect of apportionment changes, however, might be caused by spurious correlation with some other variable. Firms may respond only to the corporate rate, for example, and by including only an interaction term this makes the payroll weight look significant. On the other hand, if the true marginal tax rate facing the firm differs from the statutory rate, this will tend to reduce the estimated effect of the apportionment formula in the interaction term.

Columns (3) and (4), therefore, repeat the specifications of (1) and (2), but break the income tax induced payroll burden into two components: the payroll weight and the corporate tax rate. In both specifications, the corporate tax rate does not reduce the importance of the payroll weight. Indeed, in both cases the coefficient on the tax rate is not significantly different from zero while the coefficient on the payroll weight is both significant and the estimated effect is quite large.

Thus there probably is error in the true tax rate facing firms which reduces the coefficient on taxes and by separating the two components we can isolate the effect of the formula directly. In all four regressions, the state tax rate has no significant impact and the payroll weight does. Columns (5) and (6) simply verify that excluding state tax rates does not change the statistical significance of the payroll weight. The magnitude of the effect does increase, giving an upper-bound estimate of a 9.5 percent long-run increase in manufacturing employment from switching from double-weighted sales apportionment to single factor sales apportionment.

Finally, in column (7), we examine the impact on non-manufacturing employment. We expect the results to be proportionally smaller here than in the manufacturing sector. The coefficient on the tax rate shows that, indeed, apportionment changes do have a smaller effect on non-manufacturing but the effect is still statistically significant. For the average state, changing from one-quarter to zero payroll weight increases non-manufacturing employment by approximately 1.9 percent.

Projected Benefits for Wisconsin

In this section we look in detail at the employment effects on Wisconsin and the consequent revenue implications for the state. Since the specific estimates vary with the empirical specification, we present our most conservative point estimates, which are those presented in Table 2 column (2). Based on this analysis, we estimate that switching to a single factor sales apportionment formula will have a long-run impact of increasing the number of manufacturing jobs in Wisconsin by about 2.9 percent. At Wisconsin's base of about 619,000 manufacturing jobs (1995 estimate), this translates into about 18,000 new jobs just in manufacturing. Outside of manufacturing, the same data gives Wisconsin's employment at 2,035,000. The results in column (7) suggest that for Wisconsin, changing to single factor sales would raise non-manufacturing employment 2.4 percent, or 49,000 new jobs.

In addition to the obvious benefits of greater employment, there are also important tax revenue implications from the new jobs. Using 1995 Bureau of Economic Analysis data, we find that the average worker in Wisconsin made $20,700 per year with manufacturing workers averaging $31,400 and non-manufacturing $17,500. If the jobs created by the apportionment change are like these average jobs, we estimate that this will generate on the order of $51 million in individual income tax revenue. There is also likely to be a positive dynamic effect on other tax revenues such as sales and property tax but we do not have data on the magnitudes of these effects.

Overall, we find clear evidence that the adoption of single factor sales apportionment should increase employment, generating additional personal income and individual income tax revenues for the State of Wisconsin. Any estimate of the corporate tax revenue losses caused by the adoption of single factor sales apportionment needs to be balanced against the gains in individual tax revenue from job creation. Failing to consider this dynamic effect may result in a significant underestimation of the revenue aspects of this policy.

Tax Simplification

The costs incurred by taxpayers to comply with the tax laws represent a significant diversion of resources from other, more productive, economic activities. Compliance costs include the costs of gathering and interpreting the information needed to calculate the tax, documentation and record-keeping to support such computations, filing returns, and resolving disputes with tax authorities. A 1992 survey of large U.S. corporations found that these taxpayers spent an average of $1.5 million per year to comply with federal, state and local corporate income taxes. The study also found that, on average, the costs of complying with state and local taxes comprise 30 percent of total compliance costs. The complexity of the apportionment formula was identified as an important factor contributing to the state and local compliance burden.[16] Removing the property and payroll factors from the Wisconsin apportionment formula would ease the compliance burden by eliminating the need to compute and maintain records regarding these two factors. It would also make it easier for state tax authorities to administer the tax laws by reducing the amount of information state tax authorities must analyze to determine the appropriate amount of tax.

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16 Slemrod and Blumenthal, "The Income Tax Compliance Cost of Big Business," *Public Finance Quarterly*, October 1996.

CAVEATS AND IMPLEMENTATION ISSUES

Projected Economic Benefits Are Not a Sure Thing

A valid concern regarding any proposed tax reform is that the predicted economic benefits may be overstated. This study predicts that a single factor sales apportionment formula will enhance future job growth in Wisconsin. This prediction is not based on a theoretical model of job growth, but rather the actual experiences of other states that have modified their apportionment formulae from 1978 to 1995. Nevertheless, the past does not always predict the future, in part because circumstances can change over time. For example, Wisconsin's unemployment rate is currently at one of its lowest levels in decades and many Wisconsin businesses are experiencing a shortage of skilled labor.[17] This robust job market may limit the ability of a single factor sales formula to impact job growth, at least in the short-run.

This study also predicts that a single factor sales formula will raise an additional $51 million in individual income tax revenues per year. All revenue estimates should be approached with a degree of caution, however.[18] It is simply not possible to know with certainty how much revenue will be raised or lost by adopting a single factor sales formula. For example, increasing the weight placed on the sales factor may lead to corporate income tax revenue losses. In fact, based on a static model of revenue-estimation (which assumes that economic growth is unaffected by the law change), a 1994 Wisconsin Department of Revenue study estimated that the adoption of a single factor sales formula would result in an annual loss of $22 million in corporate tax revenues.[19] However, any estimate of the corporate tax revenue losses caused by the adoption of single factor sales apportionment needs to be balanced against the gains in individual tax revenue from job creation, which are estimated to be up to $51 million.

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17 Bureau of Labor Statistics, *Local Area Unemployment Statistics*, 1998.

18 Auerbach, "Dynamic Revenue Estimation," *Journal of Economic Perspectives*, Winter 1996.

19 Division of Research and Analysis, Wisconsin Department of Revenue, *Background Paper on Corporate Apportionment Formula*, November 10, 1994.

The Fairness Issue

Some Businesses Will Experience Tax Increases

Any change in tax policy typically creates both winners and losers, particularly in the short run. A single factor sales apportionment formula is no exception. The winners will be companies with large amounts of property and payroll in Wisconsin but with sales nationwide. They will experience substantial reductions in their Wisconsin income tax liabilities. The losers will be companies that have substantial sales in Wisconsin but which have the majority of their employment and investment located out-of-state. They will end up paying more Wisconsin income taxes. In a 1994 Department of Revenue study (see footnote 19), it was estimated that while a single factor sales formula would reduce the taxes of approximately 1,800 corporations, nearly 3,000 corporations would see their taxes increase. According to this study, industries that would benefit the most include manufacturers of food, paper, chemicals, fabricated metal products, and electronic instruments, as well as wholesale and retail traders. Industries that would experience tax increases include construction companies, tobacco and petroleum manufacturers, and various service industries. The negative impact of a single factor sales formula on selected businesses and industries may raise concerns about the fairness of this proposed tax law change.

Most Small Businesses Will Not Be Affected

It is likely that a relatively small number of corporations with large amounts of property and payroll in-state will benefit disproportionately from the adoption of a single factor sales formula. In contrast, most of Wisconsin's small businesses will not be affected by a change in apportionment formulae. Two factors explain this discrepancy. First, the activities of Wisconsin's small businesses typically do not extend beyond the state's borders. As a result, they do not apportion their income for tax purposes. Second, a relatively small number of large corporations pay the lion's share of Wisconsin corporate income taxes, and therefore any change in corporate income tax policy will tend to have a disproportionate effect on these corporations. For example, in 1994 the largest 1 percent of corporate taxpayers (those with Wisconsin taxable income of $1 million or

more) paid about $412 million in Wisconsin income taxes, or roughly 78 percent of total Wisconsin corporate income tax collections in 1994.[20] Nevertheless, the disparate effects of this proposed tax law change on large versus small businesses may also raise equity concerns.[21]

Implementation Issues

Adopting an apportionment formula based solely on sales would significantly increase the importance of how "sales" are defined, measured and attributed to Wisconsin. Therefore, the adoption of a single factor sales formula would necessitate a thorough analysis of the current rules for computing the ratio of in-state sales to sales everywhere. One example is the so-called "throw-back" provision found in current law. Under this rule, if a Wisconsin-based company sells goods to a customer located in a state in which the Wisconsin company is not taxable, 50 percent of those sales are thrown back into the numerator of the Wisconsin sales factor. Throw-back does not apply if the customer is located in a foreign country.[22] With the increased importance of the sales factor, lawmakers may wish to consider alternative approaches to throw-back, such as requiring throw back of 100 percent of a sale or eliminating throw back altogether.

Over the next 25 years, employment in the service sector of the Wisconsin economy is expected to grow faster than manufacturing employment.[23] Therefore, the adoption of a single factor sales formula should also prompt a re-evaluation of the rules for attributing sales of services to Wisconsin. Under current law, sales of services are attributed to Wisconsin to the extent the underlying income-producing activity is performed in Wisconsin.[24] As a consequence, if employee salaries are a significant cost in providing a service, the computation of the sales factor tends to mimic that of a payroll

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20 Wisconsin Legislative Fiscal Bureau, *Corporate Income Tax*, 1997.

21 As a comparison, when Illinois enacted its single factor sales apportionment formula, a local newspaper quoted Illinois state tax officials as stating that while the change would save about 7,000 Illinois corporations $217 million in state taxes annually, $60 million of those savings would go to just five corporations. *The State Journal-Register*, July 10, 1998.

22 Wis. Sec. 71.25(9)(a)-(c).

23 Division of Research and Analysis, Wisconsin Department of Revenue, *Wisconsin Long-Term Economic Forecast*, 1998.

factor. For this reason, some states, such as Minnesota, attribute sales of services based on the location of the customer receiving the service rather than the location of the costs incurred in performing the service.[25]

Finally, the adoption of a single factor sales formula should also trigger a re-evaluation of the industry-specific apportionment formulae used by air carriers, motor carriers, railroads, pipeline companies, finance companies, and public utilities.[26] For example, under current Wisconsin law, interstate banks use a special two-factor formula that includes a gross receipts and a payroll factor. Likewise, interstate motor carriers use a special two-factor formula that includes a gross receipts and a ton miles factor. If a single factor sales formula is adopted, lawmakers may wish to extend the concept to banks, motor carriers, and other industries that are currently required to use specialized formulae.

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24 Wis. Sec. 71.25(9)(d).

25 Minn. Sec. 290.191.5(j).

26 Wisconsin Admin. Code 2.46, 2.47, 2.475, 2.48, 2.49, and 2.50.

SUMMARY

This study estimates the impact that switching to a single factor sales apportionment formula would have on job creation and tax revenue for Wisconsin. Our estimates are based on the actual experiences of states that have modified their apportionment formula over the period 1978 to 1995. The analysis controls for other factors that can affect employment, such as state trends, changes in national unemployment rates, and the actions of other states regarding their apportionment formulae. Our results establish two important facts about state tax policy.

First, we provide evidence that the apportionment formula has a large and significant effect on a state's economy. The payroll weight is a significant determinant of state employment. We find that reducing the payroll weight from one-quarter to zero increases manufacturing employment by approximately 2.4 percent for the average state during the sample period. The same change increases non-manufacturing employment approximately 1.9 percent. Second, we show that these significant employment effects imply that although increasing the sales weight in a state may lead to corporate income tax revenue losses, the increased employment generates additional individual income tax revenue. Failing to consider this dynamic effect may result in a significant underestimation of the revenue aspects of this policy.

Applying these results to the State of Wisconsin, we find that increasing the sales weight in Wisconsin from 50 percent to 100 percent would have a long-run impact of increasing manufacturing employment by about 18,000 jobs and non-manufacturing employment by as many as 49,000 jobs. These new jobs would have a significant positive impact on individual income tax revenue for the State of Wisconsin, creating an estimated $51 million in additional tax revenue per year. Coupled with neighboring states' aggressive modification of their own apportionment formulae, these results underscore the need for the State of Wisconsin to act promptly to remain competitive and avoid revenue and job losses to other states.

Table 1

Descriptive Statistics for State Panel from 1978-95

Variables[a]	*Mean*	*Standard deviation*
Payroll weight	0.314	0.047
State payroll burden	0.013	0.004
State corporate tax rate	0.073	0.022
Federal corporate tax rate	0.406	0.058
Ln(national employment)	4.688	0.079
State personal income growth rate	0.017	0.022
National unemployment rate	0.069	0.012
Share of national manufacturing	0.023	0.023
Ln(manufacturing employment)	12.432	1.095
Ln(total employment)	14.135	0.95
Ln(real manufacturing wage)	3.33	0.161
Number of Observations	732	

[a] *Payroll weight* is the payroll weight in the apportionment formula (e.g., 33 percent, 50 percent, or 100 percent).
State payroll burden is the payroll weight x (state corporate tax rate)(1 - federal corporate tax rate).
State corporate tax rate is the top corporate statutory rate imposed by the state.
Federal corporate tax rate is the top corporate statutory rate.
Ln(national employment) is the log of national total employment
State personal income growth rate is the state's growth rate in per capita personal income.
National unemployment rate is the national unemployment rate in percent.
Share of national manufacturing is the state's share of national manufacturing employment.
Ln(manufacturing employment) is the log of manufacturing employment.
Ln(total employment) is the log of total employment.
Ln(real manufacturing wage) is the log of the state's real manufacturing wage.

Table 2

Regressions of Manufacturing Employment, Total Employment, Real Manufacturing Wages and Non-Manufacturing Employment on the Weight on Payroll in the Apportionment Formula and Control Variables

Dependent variables[1]	Ln(Manufacturing Employment)						Ln (Non-manufacturing employment)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Independent variables							
State payroll burden	-1.920 (0.794)						
State corporate tax rate			-0.229 (0.308)				
State payroll burden (incl. federal)		-2.231 (1.331)					-1.852 (0.806)
State corporate tax rate (incl. federal)				-0.059 (0.519)			
Payroll weight			-0.366 (0.116)	-0.309 (0.127)	-0.367 (0.116)	-0.379 (0.115)	
Mean of all states' payroll burden	6.252 (2.961)		5.721 (2.967)		5.367 (2.927)		
Mean of all states' payroll burden (incl. fed.)		10.439 (3.683)		8.111 (3.863)		7.651 (3.496)	-0.741 (1.903)
State personal income growth rate	0.380 (0.082)	0.430 (0.084)	0.390 (0.082)	0.447 (0.084)	0.391 (0.082)	0.445 (0.083)	0.170 (0.052)
National unemployment rate	-2.092 (0.286)	-2.062 (.278)	2.005 (0.288)	-1.899 (0.284)	-2.018 (0.287)	-1.987 (0.280)	-2.587 (1.765)
(Nat'l employment) x (state dummy variables)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State trends	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.793	0.795	0.794	0.797	0.794	0.797	0.794
Number of observations	732	732	732	732	732	732	732

standard errors in parentheses

[1] See Table 1 for variable definitions.